

Serial No.: 09/888,313
Group Art Unit No.: 1639

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-55. (Cancelled)

56. (Currently Amended) A method for screening a first repertoire of antibody heavy chain or antibody light chain polypeptides against a second repertoire of antibody heavy chain or antibody light chain polypeptides to identify those members of the first repertoire which interact with members of the second repertoire, comprising the steps of:

a. arranging the first repertoire in at least one first series of continuous lines wherein each line of said first series comprises a member of said first repertoire; ~~[[and]]~~

~~_____~~ b. arranging the second repertoire in at least one second series of continuous lines wherein each line of said second series comprises a member of said second repertoire; ~~[[.]]~~

~~_____~~ c. forming an array of a plurality of ~~wherein the first and second repertoires from step a and step b form an array~~, wherein ~~a plurality of~~ said first series of continuous lines ~~from step a~~ intersects with a plurality of said second series of continuous lines ~~from step b~~, ~~[[and]]~~ wherein ~~a plurality of all~~ members of the first repertoire are juxtaposed to a ~~plurality of all~~ members of the second repertoire; and

~~[[b.]]~~ d. detecting an interaction between the antibody heavy chain or antibody light chain of the first and second repertoires, thereby identifying those members of the first repertoire that interact with members of the second repertoire.

57. (Cancelled)

58. (Previously Presented) The method of claim 56, wherein said antibody heavy chain or antibody light chain polypeptides of said first or second repertoire is a domain antibody (dAb).

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59. (Previously Presented) The method of claim 56, wherein said first repertoire comprises V_H or V_L .

60. (Previously Presented) The method of claim 56, wherein said second repertoire comprises V_H or V_L .

61. (Previously Presented) The method of claim 56, wherein said first repertoire comprises V_H , and said second repertoire comprises V_L .

62. (Previously Presented) The method of claim 56, wherein said step of detecting comprises contacting said at least one array with a third repertoire of target epitope, and detecting binding of the target epitope by juxtaposed members of said first and second repertoires on said array, wherein said binding of the target epitope is indicative of an interaction of members of said first and second repertoire.

63. (Previously Presented) The method of claim 56, wherein said step of detecting comprises contacting said at least one array with a third repertoire of target antigen members arranged in a series of continuous lines, and detecting binding of target antigen by juxtaposed members of said first and second repertoires at positions on said array, wherein said binding of target antigen is indicative of an interaction of members of said first and second repertoire.

64. (Previously Presented) The method of claim 63, wherein a plurality of lines of said third repertoire each comprise a different target antigen.

65. (Previously Presented) The method of claim 56, wherein each line of said first and second series of lines is present in a channel provided in a solid material such that a plurality of channels containing a member of the first repertoire intersects a plurality of channels containing a member of the second repertoire.

66. (Previously Presented) The method of claim 56, wherein members of the first and second repertoires are applied to a single support.

67. (Previously Presented) The method of claim 56, comprising the steps of:

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a. arranging the first repertoire on a first support in a series of continuous lines and arranging the second repertoire on a second support in a series of continuous lines;

b. juxtaposing the first and second supports such that a plurality of members of the first repertoire are juxtaposed with a plurality of members of the second repertoire to form said array; and

c. detecting an interaction between members of the first and second repertoires.

68-77. (Cancelled)

78. (Previously Presented) The method of claim 56 whereby one or more of the first and second repertoires are provided by a plurality of nucleic acid sequences which encode said antibody heavy chain or antibody light chain polypeptides of said first and second repertoires and which are expressed to produce their corresponding polypeptides *in situ* in the array.

79. (Previously Presented) The method according to claim 78, wherein the nucleic acid sequences are provided by expression vectors which encode polypeptide members of the repertoire, and are operatively linked to control sequences sufficient to direct the transcription of the nucleic acid molecules.

80. (Previously Presented) The method of claim 79, wherein the expression vector is a bacteriophage.

81. (Previously Presented) The method of claim 79, wherein the expression vector is a plasmid.

82. (Previously Presented) The method of claim 79, wherein the expression vector is a linear nucleic acid molecule.

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83. (Previously Presented) The method of claim 79, wherein the nucleic acids are contained and expressed within cells.

84. (Previously Presented) The method according to claim 83, wherein the cells are selected from the group consisting of bacterial cells, lower eukaryotic cells and higher eukaryotic cells.

85. (Previously Presented) The method of claim 78, wherein the nucleic acid molecules are immobilized in the form of naked or complexed nucleic acid.

86. (Previously Presented) The method of claim 56, 62, or 63, wherein the members of at least one repertoire are arrayed using robotic means.

87-117. (Cancelled)

118. (Previously Presented) The method of claim 62, whereby one or more of the first, second and, third repertoires are provided by a plurality of nucleic acid sequences which encode said antibody heavy chain or antibody light chain polypeptides of said first and second repertoires or said target epitope of said third repertoire and which are expressed to produce their corresponding polypeptides *in situ* in the array.

119. (Previously Presented) The method of claim 63, whereby one or more of the first, second and, third repertoires are provided by a plurality of nucleic acid sequences which encode said antibody heavy chain or antibody light chain polypeptides of said first and second repertoires or said target antigen of said third repertoire and which are expressed to produce their corresponding polypeptides *in situ* in the array.